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| **Vibration (hand arm)** |
| **Description of activity**  Use of hand held power tools & machines. |

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| **Introduction** |
| All power tools create levels of vibration transmittable to the operator.  The Health and Safety Executive has placed an exposure action value and a limit value on the amount of time an operator can be exposed to certain levels of vibration.  The measure is standardised to the European Directive means of measurement.  See BS EN ISO 5349-1:2001. The acceleration is referred to as the vibration total valueand is measured in 3 directions.  **Assessment value/limit applicable to vibration**  **Exposure Action Value (EAV)**  The action value is \*2.5 m/s2 A (8), as an 8-hour TWA. This is the value to which a person can be exposed for an 8-hour period in any one working day at which action must be taken as described in the (Regulations) HSE Guidance.  Where the EAV time is exceeded a programme of preventive measures and health surveillance must be introduced (HSE MISC112) e.g. monitoring by a medical professional.  **Exposure Limit Value (ELV)**  The limit value of \*5 m/s2 A (8) represents the total limit of vibration from all sources that a person can be exposed over an 8-hour working day. This limit should not be exceeded.  **Assessment**  This requires an assessment for each individual tool based on the manufacturers’ vibration figure and the HSE time limit.  The person in charge of the work must know the manufacturer and tool reference code/number to access the vibration figure.  Any person hiring equipment must find out from the hirer (or tool manufacturer) the relevant vibration figure.  **Manufacturers and supplier’s information**  The supply of safety information is mandatory under several pieces of legislation e.g. Consumer Protection Act. Manufacturers/suppliers are required to supply vibration figures for each hand-held power tool. These vibration figures can then be related back to the HSE vibration time limit requirements. |

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| **Hazards & consequences** |
| Regular exposure to Hand Arm Vibration (HAV) can cause a range of permanent injuries to the hands and arms that are known as Hand-Arm Vibration Syndrome (HAVS).  The severity may depend on the following;   * How high the vibration levels are? * How long equipment used for? * How awkward is it to use the equipment, ergonomics of the task? * How tightly equipment has to be gripped. * How cold and wet when using the equipment? * Individual susceptibility (may appear after only a few months). |

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| **Tools & equipment used** |
| Hand held equipment including drills including hammer types & disc cutter. |

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| **Health Surveillance** |
| Our operatives are not likely to exceed the Action Value on a frequent or regular basis as the use of these tools and equipment are managed administratively e.g. job rotation (so that detailed health surveillance/monitoring is not required).  In the company’s work environment power tools are not used continually, any works such as drilling & cutting may be required only at specific times in a project.  See Vibration Guideline documents in Information & Guidance folder for more information. |

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| **Persons likely to be exposed to the risk** |
| Operator only. |

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| **Initial risk** | **Without controls and precautions in place** | | | | | | | | | |
| Likelihood | 1 | | 2 | | 3 | | 4  **X** | | 5 | |
| Severity | 1 | | 2 | | 3 | | 4 | | 5  **X** | |
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| **Initial risk rating** | | 20 | | **High** | |  | |  | |  |
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| **Acceptable** | | No | |  | |  | |  | |  |

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| **Control measures** |
| * Operatives are instructed in the safe use of machines during skills and job training. * The equipment used meets European physical hazards directive standards and is 'CE' marked.   Information on equipment vibration levels is available.  There is no other physical control measure appropriate to the type of machines being used. The HSE has considered the use of anti-vibration gloves and regard them as useful. The HSE has considered anti vibration handles and regards their affect as beneficial.  **The Manager**   * Will assess the work to be done and ascertain whether there is an alternate method to be used without using a power tool creating unacceptable levels of vibration. * Will select equipment (as far as reasonably practicable) with the lowest vibration figure effective for carrying out the works e.g. built in vibration control. Consult the vibration figures available from the manufacturer. * Will ensure that equipment is in good working order & serviced (poorly maintained equipment can create more vibration than the manufacturers figures). Also, to ensure that tools are sharp and if rotating well balanced and properly fitted (e.g. trained person to fit abrasive wheels). * Will limit the time worked by the operator (considering also that several different types of equipment may be used in any one day and estimate the time limit for each – in relation to the work to be achieved) using the vibration guidelines available in the Information & Guidance section of our HSE management system.   **Note**: This is a daily exposure limit to be applied for each day (cannot average over several days).   * Will arrange job rotation so that time limits for individuals are not exceeded (thereby obviating the necessity to apply health surveillance). * Will enquire regularly of operatives (health surveillance) whether they may be affected by using vibrating equipment. * Ensure that appropriate warm work wear is available and that a warm refuge is available for operatives to ‘warm up’.   Managers will inform, instruct, train, and remind operatives in the following so they can reduce/minimise the effects of vibration:   * Limit of time for use of the equipment. * Avoid long periods of use, short bursts are better. * To keep up blood circulation; keep warm, especially hands. * Wear warm gloves and extra clothing if temperature is cold. * Do not smoke, or cut down just before and while at work; smoking affects blood flow. * Exercise hands and fingers to improve blood flow. * Do not use more force than is necessary. * Not to ignore symptoms and report them so that action can be taken. * Correct use of equipment. |

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| **Comments** |
| We will refer operatives reporting vibration effects or effects recognised by routine supervisory enquiry to a medical practitioner and arrange for health advice to be made available.  Other information such as procedures, if required, to be attached separately. |

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| **Residual risk** | **With controls and precautions in place** | | | | |
| Likelihood | 1 | 2  **X** | 3 | 4 | 5 |
| Severity | 1 | 2 | 3  **X** | 4 | 5 |
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| **Residual risk rating** | 6 | **Low** |  |  | |
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| **Acceptable** | Yes |  | | | |

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| **Assessor** | Anthony Rose | **Signed** |  | **Date** | 4/1/23 |